

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/583,212
Source: ILFWP
Date Processed by STIC: 6/27/06

ENTERED



IFWP

RAW SEQUENCE LISTING

DATE: 06/27/2006

PATENT APPLICATION: US/10/583,212

TIME: 10:45:21

Input Set : A:\1187-30.ST25.txt

Output Set: N:\CRF4\06272006\J583212.raw

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3 <110> APPLICANT: CropDesign N.V.
5 <120> TITLE OF INVENTION: Plants having modified growth characteristics and method for
6   making the same
8 <130> FILE REFERENCE: 1187-30
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/583,212
C--> 10 <141> CURRENT FILING DATE: 2006-06-16
10 <150> PRIOR APPLICATION NUMBER: PCT/EP2004/053594
11 <151> PRIOR FILING DATE: 2004-12-17
13 <150> PRIOR APPLICATION NUMBER: EP 03104764.0
14 <151> PRIOR FILING DATE: 2003-12-17
16 <150> PRIOR APPLICATION NUMBER: US 60/531,866
17 <151> PRIOR FILING DATE: 2003-12-22
19 <160> NUMBER OF SEQ ID NOS: 7
21 <170> SOFTWARE: PatentIn version 3.3
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 1380
25 <212> TYPE: DNA
26 <213> ORGANISM: Nicotiana tabacum
28 <400> SEQUENCE: 1
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31 ggtaagttta aaggccaagg taggggttttg ggtggttcat ctcttcagg accctcaa      120
33 catgtcaata atttttcac acatccccta aatacaaggc aagatcaaca accttcata      180
35 acaaaaaactt cgcctcaaaa accaagtaat tctgatcaaa gaattgagaa tatatgtgaa      240
37 attcagttca acaaaaagtga atcaaaggat ggttttgatc catttggtga attagtcact      300
39 tctgggaaga gaaacccaaa agggatttca cttactaatg tgtttgaatg ccctgtctgt      360
41 ggtagtgggt ttgtttctga agaagagggt tcaactcata ttgatagctg ttttaagttct      420
43 gaagtgtctt ctaatttggg agttgaaagt aaagttgaag ttaaaagtga attggaaaca      480
45 tgtgttagtg catatgtttc agggaagccc tcagaagggt cagttgaagt ggtcattaag      540
47 ttgttaaaga atattgtgaa ggaaccagag aatgccaagt ttaggaaaat aaggatgggg      600
49 aatccaaaaa taaaagggtgc tatagggtgat gttgtaggag gagtggagct attggaattt      660
51 gttggatttg agttgaaaaga agaagggtggg gaaatttggg ctgtgatgga tgttccttct      720
53 gaagaacaac ttgttatgct taagaatgta gtttctactt tggaaccgaa gaaggttgaa      780
55 gagttggcgt ccttatccca agttaaggcg agtgaaccag ttgagccgaa gaagattgat      840
57 agacagattc gagtgttctt ttctgttccc gagagcgtag cagcaaaaat tgagctacct      900
59 gattccttct ttaacctctc acgtgaggaa ttgagaagag aagcagagat gaggaagaag      960
61 aaattagaag attccaaatt attgattcct aaatcttctt gggaaaagca ggcaaaagct      1020
63 gcaagaaaga agtacacaaa atccattatc cgtgtacagt ttccagatgg agcattgctt      1080
65 caaggtgtct ttctaccttc ggagccaact agtgctcttt atgagtttgt gagcgagcg      1140
67 ttaaaaggaac caagcttaga gttcgaattg ttacatccgg tgcttgtaa aaagcgggtg      1200
69 attcccaatt ttccagctgc tggggagagg gctgtaacag ttgaagagga ggatttggtt      1260
71 cctgcagctc tactcaaaatt taaacctatc gaaacagatt ctgttgtttt tactggtctt      1320
73 tgtaatgagc ttcttgaaat tagcgagccc ctcgagaccg gatcagttgc ttctcgtaa      1380
76 <210> SEQ ID NO: 2

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RAW SEQUENCE LISTING

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Input Set : A:\1187-30.ST25.txt

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77 <211> LENGTH: 459

78 <212> TYPE: PRT

79 <213> ORGANISM: Nicotiana tabacum

81 <400> SEQUENCE: 2

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83 Met Gly Asp Met Lys Asp Lys Val Lys Gly Phe Met Lys Lys Val Thr
84 1          5          10          15
87 Ser Ser Ser Ser Gly Lys Phe Lys Gly Gln Gly Arg Val Leu Gly Gly
88          20          25          30
91 Ser Ser Ser Ser Gly Pro Ser Asn His Val Asn Asn Phe Ser Ser His
92          35          40          45
95 Pro Leu Asn Thr Arg Gln Asp Gln Gln Pro Ser Tyr Thr Lys Thr Ser
96          50          55          60
99 Pro Gln Lys Pro Ser Asn Ser Asp Gln Arg Ile Glu Asn Ile Cys Glu
100 65          70          75          80
103 Ile Gln Phe Asn Lys Ser Glu Ser Lys Asp Gly Phe Asp Pro Phe Gly
104          85          90          95
107 Glu Leu Val Thr Ser Gly Lys Arg Asn Pro Lys Gly Tyr Ser Leu Thr
108          100         105         110
111 Asn Val Phe Glu Cys Pro Val Cys Gly Ser Gly Phe Val Ser Glu Glu
112          115         120         125
115 Glu Val Ser Thr His Ile Asp Ser Cys Leu Ser Ser Glu Val Ser Ser
116          130         135         140
119 Asn Leu Gly Val Glu Ser Lys Val Glu Val Lys Ser Glu Leu Glu Thr
120 145         150         155         160
123 Cys Val Ser Ala Tyr Val Ser Gly Lys Pro Ser Glu Gly Ser Val Glu
124          165         170         175
127 Val Val Ile Lys Leu Leu Lys Asn Ile Val Lys Glu Pro Glu Asn Ala
128          180         185         190
131 Lys Phe Arg Lys Ile Arg Met Gly Asn Pro Lys Ile Lys Gly Ala Ile
132          195         200         205
135 Gly Asp Val Val Gly Gly Val Glu Leu Leu Glu Phe Val Gly Phe Glu
136          210         215         220
139 Leu Lys Glu Glu Gly Gly Glu Ile Trp Ala Val Met Asp Val Pro Ser
140 225         230         235         240
143 Glu Glu Gln Leu Val Met Leu Lys Asn Val Val Ser Leu Leu Glu Pro
144          245         250         255
147 Lys Lys Val Glu Glu Leu Ala Ser Leu Ser Gln Val Lys Ala Ser Glu
148          260         265         270
151 Pro Val Glu Pro Lys Lys Ile Asp Arg Gln Ile Arg Val Phe Phe Ser
152          275         280         285
155 Val Pro Glu Ser Val Ala Ala Lys Ile Glu Leu Pro Asp Ser Phe Phe
156          290         295         300
159 Asn Leu Ser Arg Glu Glu Leu Arg Arg Glu Ala Met Arg Lys Lys
160 305         310         315         320
163 Lys Leu Glu Asp Ser Lys Leu Leu Ile Pro Lys Ser Tyr Arg Glu Lys
164          325         330         335
167 Gln Ala Lys Ala Ala Arg Lys Lys Tyr Thr Lys Ser Ile Ile Arg Val
168          340         345         350
171 Gln Phe Pro Asp Gly Ala Leu Leu Gln Gly Val Phe Leu Pro Ser Glu

```

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DATE: 06/27/2006

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Input Set : A:\1187-30.ST25.txt

Output Set: N:\CRF4\06272006\J583212.raw

```

172          355          360          365
175 Pro Thr Ser Ala Leu Tyr Glu Phe Val Ser Ala Ala Leu Lys Glu Pro
176          370          375          380
179 Ser Leu Glu Phe Glu Leu Leu His Pro Val Leu Val Lys Lys Arg Val
180 385          390          395          400
183 Ile Pro His Phe Pro Ala Ala Gly Glu Arg Ala Val Thr Val Glu Glu
184          405          410          415
187 Glu Asp Leu Val Pro Ala Ala Leu Leu Lys Phe Lys Pro Ile Glu Thr
188          420          425          430
191 Asp Ser Val Val Phe Thr Gly Leu Cys Asn Glu Leu Leu Glu Ile Ser
192          435          440          445
195 Glu Pro Leu Glu Thr Gly Ser Val Ala Ser Ser
196          450          455

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199 <210> SEQ ID NO: 3

200 <211> LENGTH: 1311

201 <212> TYPE: DNA

202 <213> ORGANISM: Saccharum officinarum

205 <220> FEATURE:

206 <221> NAME/KEY: misc_feature

207 <222> LOCATION: (277)..(279)

208 <223> OTHER INFORMATION: n can be any nucleotide

210 <400> SEQUENCE: 3

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211 atgatgaagg acaagatgaa ggagttcatg aagaagggtca cctcctccgg gtccgggacc      60
213 cctcctcct tcaagggcac ctcccacgtc ctcggtcccg gcccctcccc ctctcctcc      120
215 caccgcgtg cccgctcctc aaaccctagc ccaaacctca ggcccgctcc taagcggacc      180
217 tcgccacct ccccgccac tttaaccacc gatttgacct ccttcacgcc cctcgtctgc      240
W--> 219 tactcctccc gccgccccga cgcgaacggc accgcgnnng ccgtcgccac cgtcgcgtgc      300
221 ccagctgcy gagacgcgtt tccgtccgag ctcgccgtct ccgagcatct cgacggctgc      360
223 ctcgctcgc cggggggcgc ccgcgcgcgc gccgcgcgt acctcgccgc cgacccgcct      420
225 ccgccgcgc cctccgtaga ggtgggtcaa cgctgctgg gcaacctgct ccgggagccc      480
227 ggcaacgata agttcaggcg ggtgagattg ggtaaccgcg ggatcaagga ggccctggca      540
229 gacagggatg gcgggggtgga gctcctggag gccgtcggct tcacagttgg ggatgagggc      600
231 ggggagccct tcgccgtgat ggacgaagtg cctagcgacc ctaggctcaa cgggatcagg      660
233 agggccgtcc tcctgctcga gggggcacac ccctctgcgc ctccagtga ggcggaggct      720
235 gaggccaagg agagctgcag caatgtgtct gacgtgcagg aggtgtctaa gactattgat      780
237 cggcagattc gggatattgt ctctgttcct gggagttcta tggcacaaaa tgatgtacca      840
239 gattcttttt acaagcttag tggtagagg ataaaggaat aagcaaagat gaggagggaa      900
241 aggttagaac aatctcgatt gctgatacca aagtcttaca aggagaaaca ggcattggct      960
243 gctcgacaga agtataaaca agcagtcatt cgagttcagt ttccagatag aatgattctt     1020
245 cagggcatat tcctaccagg agaggccact agttcactgt atgagttcgt cacatctgct     1080
247 ctgaagcaat caggtttgga attcgaactt atctctccag ccatacctaa gccacgtgtg     1140
249 gtgcccatt ttccaaaccc gggagagcgg gcacgcacct tgcaagagga ggagctggct     1200
251 ccactctgcg tcctcaagtt cattcccaag gagactgatt ccattggttt caccggtttg     1260
253 cttgatgagc ttctcatggc cagtgaagcg cttcctgctg catcacaatg a              1311
256 <210> SEQ ID NO: 4
257 <211> LENGTH: 436
258 <212> TYPE: PRT
259 <213> ORGANISM: Saccharum officinarum
262 <220> FEATURE:

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RAW SEQUENCE LISTING

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Input Set : A:\1187-30.ST25.txt

Output Set: N:\CRF4\06272006\J583212.raw

263 <221> NAME/KEY: MISC_FEATURE
 264 <222> LOCATION: (93)..(93)
 265 <223> OTHER INFORMATION: Xaa can be any amino acid
 267 <400> SEQUENCE: 4
 269 Met Met Lys Asp Lys Met Lys Glu Phe Met Lys Lys Val Thr Ser Ser
 270 1 5 10 15
 273 Gly Ser Gly Thr Pro Ser Ser Phe Lys Gly Thr Ser His Val Leu Gly
 274 20 25 30
 277 Ser Gly Pro Ser Pro Ser Ser Ser His Pro Ala Ala Arg Ser Ser Asn
 278 35 40 45
 281 Pro Ser Pro Asn Leu Arg Pro Ala Pro Lys Arg Thr Ser Pro Pro Thr
 282 50 55 60
 285 Pro Pro Thr Leu Thr Thr Asp Leu Thr Ser Phe Thr Pro Leu Val Cys
 286 65 70 75 80
 W--> 289 Tyr Ser Ser Arg Arg Pro Asp Ala Asn Gly Thr Ala Xaa Ala Val Ala
 290 85 90 95
 293 Thr Val Ala Cys Pro Ser Cys Gly Asp Ala Phe Pro Ser Glu Leu Ala
 294 100 105 110
 297 Val Ser Glu His Leu Asp Gly Cys Leu Ala Ser Ala Gly Gly Ala Arg
 298 115 120 125
 301 Ala Arg Ala Ala Ala Tyr Leu Ala Ala Asp Pro Pro Pro Pro Ala Ala
 302 130 135 140
 305 Ser Val Glu Val Val Lys Arg Leu Leu Gly Asn Leu Leu Arg Glu Pro
 306 145 150 155 160
 309 Gly Asn Asp Lys Phe Arg Arg Val Arg Leu Gly Asn Pro Arg Ile Lys
 310 165 170 175
 313 Glu Ala Leu Ala Asp Arg Asp Gly Gly Val Glu Leu Leu Glu Ala Val
 314 180 185 190
 317 Gly Phe Thr Val Gly Asp Glu Gly Gly Glu Pro Phe Ala Val Met Asp
 318 195 200 205
 321 Glu Val Pro Ser Asp Pro Arg Leu Asn Gly Ile Arg Arg Ala Val Leu
 322 210 215 220
 325 Leu Leu Glu Gly Ala His Pro Ser Ala Pro Pro Val Lys Ala Glu Ala
 326 225 230 235 240
 329 Glu Ala Lys Glu Ser Cys Ser Asn Val Ser Asp Val Gln Glu Gly Ala
 330 245 250 255
 333 Lys Thr Ile Asp Arg Gln Ile Arg Val Phe Val Ser Val Pro Gly Ser
 334 260 265 270
 337 Ser Met Ala Gln Asn Asp Val Pro Asp Ser Phe Tyr Lys Leu Ser Gly
 338 275 280 285
 341 Glu Glu Ile Arg Asn Glu Ala Lys Met Arg Arg Glu Arg Leu Glu Gln
 342 290 295 300
 345 Ser Arg Leu Leu Ile Pro Lys Ser Tyr Lys Glu Lys Gln Ala Leu Ala
 346 305 310 315 320
 349 Ala Arg Gln Lys Tyr Lys Gln Ala Val Ile Arg Val Gln Phe Pro Asp
 350 325 330 335
 353 Arg Met Ile Leu Gln Gly Ile Phe Leu Pro Gly Glu Ala Thr Ser Ser
 354 340 345 350
 357 Leu Tyr Glu Phe Val Thr Ser Ala Leu Lys Gln Ser Gly Leu Glu Phe

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/583,212

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Input Set : A:\1187-30.ST25.txt

Output Set: N:\CRF4\06272006\J583212.raw

```

358          355          360          365
361 Glu Leu Ile Ser Pro Ala Ile Pro Lys Pro Arg Val Val Pro His Phe
362          370          375          380
365 Pro Asn Pro Gly Glu Arg Ala Arg Thr Leu Gln Glu Glu Glu Leu Val
366 385          390          395          400
369 Pro Ser Ala Leu Leu Lys Phe Ile Pro Lys Glu Thr Asp Ser Met Val
370          405          410          415
373 Phe Thr Gly Leu Leu Asp Glu Leu Leu Met Ala Ser Glu Pro Leu Pro
374          420          425          430
377 Ala Ala Ser Gln
378          435
381 <210> SEQ ID NO: 5
382 <211> LENGTH: 3048
383 <212> TYPE: DNA
384 <213> ORGANISM: Artificial sequence
386 <220> FEATURE:
387 <223> OTHER INFORMATION: expression cassette comprising GRUBX (1011-2390) operably
linked

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```

388 to the prolamine promoter (1-654) and the T-Zein + T-Rubisco
389 deltaG terminator (2615-2808 and 2852-3048)
391 <400> SEQUENCE: 5
392 cttctacatc ggcttaggtg tagcaacacg actttattat tattattatt attattattt 60
394 ttatttttaca aaaatataaa atagatcagt ccctcaccac aagtagagca agttggtgag 120
396 ttattgtaaa gttctacaaa gctaatttaa aagttattgc attaacttat ttcattattac 180
398 aaacaagagt gtcaatggaa caatgaaaac catatgacat actataattt tgtttttatt 240
400 attgaaatta tataattcaa agagaataaa tccacatagc cgtaaagttc tacatgtggt 300
402 gcattaccaa aatatatata gcttacaaaa catgacaagc ttagtttgaa aaattgcaat 360
404 ccttatcaca ttgacacata aagttagtga tgagtcataa tattattttc tttgctaccc 420
406 atcatgtata tatgatagcc acaaagttac tttgatgatg atatcaaaga acatttttag 480
408 gtgcacctaa cagaatatcc aaataatatg actcacttag atcataatag agcatcaagt 540
410 aaaactaaca ctctaaagca accgatggga aagcatctat aaatagacaa gcacaatgaa 600
412 aatcctcatc atccttcacc acaattcaaa tattatagtt gaagcatagt agtaatttaa 660
414 atcaactagg gatctacaaa gtttgtacaa aaaagcaggg tggtaccggt ccggaattcc 720
416 cgggatatcg tgcacccacg cgctcgccaa tatcagattt ctttcatgaa ctccacttcc 780
418 aattttctcat tgcctcttct tcccatttcc acctccaaag ccctccttcc agaaaacctt 840
420 gttccttaca tttcttagcc ccaaaaaaga ttcccatctc aattccacaa aaaaacacaa 900
422 ggagatctaa ggaaattccc cgctctata tatagagagg tggaattggt cctgaatttg 960
424 gtttgaattg attgattgac agattttggt gagagggtgt tattgaaaaa atgggtgaca 1020
426 tgaaggataa agtcaaaggg ttcattgaaa aagtcacatc ttcttcttca ggtaagttta 1080
428 aaggccaagg tagggttttg ggtggttcat cttcttcagg accctcaaag catgtcaata 1140
430 atttttcatc acatccccta aatacaaggc aagatcaaca accttcatat acaaaaactt 1200
432 cgcctcaaaa accaagtaat tctgatcaaa gaattgagaa tatatgtgaa attcagttca 1260
434 acaaaagtga atcaaaggat ggttttgatc catttggtga attagtcact tctgggaaga 1320
436 gaaacccaaa agggatttca cttactaatg tgtttgaaat ccctgtctgt ggtagtgggt 1380
438 ttgtttctga agaagagggt tcaactcata ttgatagctg ttaaagttct gaagtgtctt 1440
440 ctaatttggg agttgaaagt aaagttgaag ttaaaagtga attggaaaca tgtgttagtg 1500
442 catatgtttc aggaagccc tcagaagggt cagttgaagt ggtcattaag ttgttaaaga 1560
444 atattgtgaa ggaaccagag aatgccaaat ttaggaaaat aaggatgggg aatccaaaaa 1620
446 taaaagggtc tataggtgat gttgtaggag gagtggagct attggaattt gttggatttg 1680
448 agttgaaaga agaagggtgg gaaatttggg ctgtgatgga tgttccttct gaagaacaac 1740

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/583,212

DATE: 06/27/2006
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Input Set : A:\1187-30.ST25.txt
Output Set: N:\CRF4\06272006\J583212.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 277,278,279

Seq#:4; Xaa Pos. 93

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/583,212

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Input Set : A:\1187-30.ST25.txt

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L:10 M:270 C: Current Application Number differs, Replaced Current Application No

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:219 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:240

L:289 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:80